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## United States Patent [19]

Dillon et al.

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[54] **PARTIALLY RIGID-PARTIALLY FLEXIBLE  
ELECTRO-OPTICAL SENSOR FOR  
FINGERTIP TRANSILLUMINATION**

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[58] Field of Search ..... 600/310, 322,  
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[57] **ABSTRACT**

A sensor is provided for transillumination of a blood-profused portion of a human fingertip. The sensor includes an opaque, semi-cylindrical substantially rigid cradle member having a photosensor mounted to a concave surface thereof such that ambient light cannot penetrate the cradle member and induce erroneous readings. A flexible planar web-like support structure is attached at one end thereof to the cradle member and includes a light source mounted within the web thereof. A repositionable adhesive coating on the concave surface of the cradle member holds the fleshy portion of a human fingertip in conformance therewith, and when the flexible planar web-like support structure is wrapped around a fingertip within the cradle member, the light source overlies the photosensor for transillumination of the fingertip.

18 Claims, 2 Drawing Sheets

